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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,499	11/14/2001	Ligui Zhou	0179.0029	3237

7590 04/16/2004  
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EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/001,499

Applicant(s)

ZHOU ET AL.

Examiner

Steven D. Maki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004 and 24 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-25 and 30 is/are allowed.
- 6) ☒ Claim(s) 26-29 and 31-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1) Claim 26 is objected to because of the following informalities: In claim 26, "wherein said thermosetting resin comprising a" should be --wherein said thermosetting resin comprises a--. Appropriate correction is required.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claims 29 and 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 29 (dependent on claim 26), the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the *combination* of the subject matter of (1) the thermosetting resin comprising a tetrafunctional epoxy (claim 26) *and* (2) the specific composition of "10 to 40 parts by weight of a trifunctional epoxy resin, 10 to 40 parts by weight of a difunctional epoxy resin, 11 to 25 parts by weight of an aromatic curing agent, 0 to 3 parts by weight of a non-aromatic curing agent, 5 to 15 parts by weight of said thermoplastic viscosity control agent wherein said thermoplastic viscosity control agent comprises micronized polyethersulfone, and 8 to 30 parts being weight of said thermoplastic fillet forming particles" (claim 29). Although the original disclosure

supports using tetrafunctional epoxy *or* the specific composition, the original disclosure fails to reasonably convey using tetrafunctional epoxy *in combination with* 10-40 parts trifunctional epoxy and 10-40 parts difunctional epoxy of the specific composition in claim 29.

In claim 38 (dependent on claim 35), the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the *combination* of the subject matter of (1) the thermosetting resin comprising a tetrafunctional epoxy (claim 35) *and* (2) the specific composition of "10 to 40 parts by weight of a trifunctional epoxy resin, 10 to 40 parts by weight of a difunctional epoxy resin, 11 to 25 parts by weight of an aromatic curing agent, 0 to 3 parts by weight of a non-aromatic curing agent, 5 to 15 parts by weight of said thermoplastic viscosity control agent wherein said thermoplastic viscosity control agent comprises micronized polyethersulfone, and 8 to 30 parts being weight of said thermoplastic fillet forming particles" (claim 38). Although the original disclosure supports using tetrafunctional epoxy *or* the specific composition, the original disclosure fails to reasonably convey using tetrafunctional epoxy *in combination with* 10-40 parts trifunctional epoxy and 10-40 parts difunctional epoxy of the specific composition in claim 38.

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) **Claims 26, 31 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhou et al '910 (US 6508910) or Zhou et al '257 (US 6440257).**

US 6508910 and US 6440257, which were filed before this application, each have a different inventive entity than this application. This rejection cannot be overcome by filing a statement that "the application and the reference were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person" since this is a 35 USC 102 rejection instead of a 35 USC 103 rejection. In other words, applicant cannot rely on the prior art exclusion under 35 USC 103(c) to overcome this 35 USC 102(e) rejection.

Claims 26, 31 and 35 are not entitled to the benefit of the filing date of either of the parent applications since each of these claims are not directed solely to the subject matter of the parent applications. In particular, claims 26 and 35 are not entitled to the benefit of the filing date of either of the parent applications since each of claims 26 and 35 describe the genus "tetrafunctional epoxy" which is not disclosed in the parent

applications. Without the benefit of the filing date of the parent applications, the filing date of claims 26, 31 and 35 is 11-14-01 (the filing date of this CIP application) which is after the filing date (2-27-01) of US 6508910 and the filing date (5-18-00) of US 6440257, which as noted above each have a different inventive entity than this application.

As to claims 26, 31 and 35: Although Zhou et al '910 / '257 do not disclose the genus "tetrafunctional epoxy", Zhou et al '910 / '257 do describe the species "tetraglycidyl-diaminodiphenylmethane". See col. 6 line 7 of Zhou et al '257 and col. 5 lines 54-55 of Zhou et al '910. Although Zhou et al '910 / '257 disclose the genus difunctional epoxy (and examples thereof) and trifunctional epoxy (and examples thereof), the disclosure of the single species "tetraglycidyl-diaminodiphenylmethane" indicates that other tetrafunctional epoxies were not contemplated and thereby not disclosed.

**7) Claims 27-29, 32-34, 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhou et al '910 (US 6508910) or Zhou et al '257 (US 6440257) in view of Watanabe et al (US 5317068) and Japan '619 (JP 3-243619).**

As to claims 27-29, 32-34 and 36-38, Zhou et al '910 and Zhou et al '257 are available as prior art under 35 USC 102(e) against these claims since none of these claims are directed solely to the subject matter of the parent applications so as to obtain the benefit of the filing date of the parent applications. In other words, these claims have a filing date of 11-14-01 (the filing date of this application). Furthermore, this application fails to contain the required evidence for prior art exclusion under 35 USC

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103 (c) - e.g. a statement that "the application and the reference were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person". Although Zhou et al '910 and Zhou et al '257 have substantially the same disclosure, they are applied in the alternative since removal of one as prior art (for example via the 103(c) exclusion) does not necessarily remove the other as prior art.

Zhou et al '910 / Zhou et al '257 substantially disclosure the claimed invention except for the use of dicyandiamide curing agent. As to claims 27-28, 32-33 and 36-37, it would have been obvious to use the claimed curing agent for the epoxy resin in Zhou et al '910 / Zhou et al '257 in view of the suggestion from Watanabe et al and Japan '619 to use dicyandiamide as a curing agent for epoxy resin. As to claims 28 and 37, at least Japan '619 suggests using dicyandiamide and diaminodiphenylsulfone.

As to claims 29, 34, and 38, the claimed composition would have been obvious in view of (1) the specific composition described by Zhou et al '910 (col. 6 lines 23-28, example 1) / Zhou et al '257 (col. 6 lines 47-58, example 1) and (2) the suggestion from Watanabe et al and Japan '619 to use tetrafunctional epoxy with another type of epoxy resin.

#### **Allowable Subject Matter**

8) **Claims 1-25 and 30 are allowed over the prior art of record.**

#### **Remarks**

9) Applicant's arguments with respect to claims 26-29 and 31-38 have been considered but are moot in view of the new ground(s) of rejection.

The terminal disclaimer filed 12-24-03 is proper and has been recorded. Accordingly, the obvious type double patenting rejection over US 6508910 has been withdrawn.

10) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

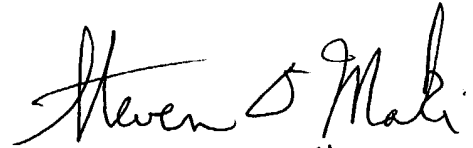
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
April 13, 2004

  
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PRIMARY EXAMINER  
~~GROUP 1300~~  
AV 1733  
4-13-04